

## Groin Pain in the Collegiate Athlete



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Case Rounds  
Fall 2009

## Patient Subjective

- Male collegiate lacrosse player
- C/C left groin pain
- Onset 2 weeks ago during a lacrosse game.
- MOI: slipped on grass



## What more do you want to know?

Why?



## Health History

- Hip Outcome Score:
  - Activities of daily living: 67%
    - Global rating scale: 55%
  - Sports Subscale: 42%
    - Global rating scale /GRS: 10%



## Subjective

- Recently recovered from a left knee and ankle injury.
- No past surgical history reported.
- Meds: Adderol, Ketoprofen.
- Diagnostic testing: none
- Goals
  - to decrease pain
  - return to pain free sport.

## Pain Complaints

- Dull ache with occasional stabbing into L medial thigh
- L groin/lower abdominal region/L thigh
- Currently 4/10, 8/10 at worst.
- Increased with daily transitions, running, lifting, etc.
- Decreased with rest/ice.

### Question 1

- Function of what organ are you most concerned with while using NSAIDS?
  - a) Kidney
  - b) Liver
  - c) Gall Bladder
  - d) Pancreas



### What can be causes of groin pain?



### What do we want to measure?



WHY?

### Objective

- Standing and Gait: ASIS/PSIS/Iliac crest elevated on the left. Increased pronation on right during midstance.
- Lumbopelvic: (+) supine-sit, standing flexion.
- Palpation: (+) pubic symphysis bilateral. (+) inferior left pubic tubercule, adductor tendons bilateral, distal adductor muscle bellies.
- (-) edema or ecchymosis

### Question 2

- ASIS height L>R; PSIS height R<L; Iliac crest height L>R; what does these indicate?
  - a) Left Upslip
  - b) Right Upslip
  - c) Right anterior rotation
  - d) Left Anterior rotation



### Objective

Hip PROM	Right	Left
Abduction	50°	50°
Adduction	22°	15°
Extension	40°	25°
Internal Rotation	40°	30°
External Rotation	50°	50°
Prone Knee Flexion	135°	130°

Other Objective	Right	Left
Ober Testing	(+)	(+)
Trendelenberg	(-)	(-)
Hip Mobility (ing/post)	Normal	Normal

## Objective

Hip MMT (out of 5)	Right	Left
Flexion	4-	4-
Extension	5	4
Abduction	4+	4
Adduction	4+	3-
Internal Rotation	4+	4-
External Rotation	4+	4-
Prone Knee Flexion	5	5

## Question 3

- How would you expect an adductor muscle strain to present?
  - a) Pain with resisted adduction, pain with resisted abduction
  - b) Pain with resisted adduction, pain with passive adduction
  - c) No pain with resisted adduction, pain with resisted abduction
  - d) Pain with resisted adduction, pain with passive abduction.



## Objective

Hip MMT (out of 5)	Right	Left
Flexion	4-	4-
Extension	5	4
Abduction	4+	4
Adduction	4+	3-
Internal Rotation	4+	4-
External Rotation	4+	4-
Prone Knee Flexion	5	5

What are you thinking? Why?  
Possible Diagnosis?



## Differential Diagnosis

- Athletic pubalgia
- Pubic Rami stress fractures
- Osteitis Pubis
- Avulsion fracture

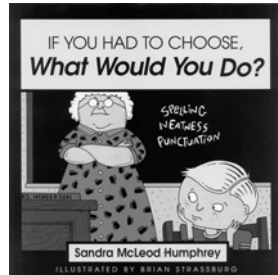
## Question 4

- What imaging would be most helpful to rule out the possibility of a stress fracture?
  - a) Bone Scan
  - b) X-Ray
  - c) CT scan
  - d) Pet Scan



## What would you do with this patient?

- Can you help him?



## General Treatment Plan

- 3-4 visits
- Alert M.D to excessive intensity of pain
- Monitor response to tx.



## 1<sup>st</sup> few treatments...

- Assessment of left upslip and upslip correction
- STM to the adductors and the quad lumborum
- Pain modalities
- Sub max isometrics
- Core stability progression as tolerated
- Monitor for lack of response

## Questions 5

- You treat for 3 visits and there is no change in pain rating, function, and motion you decide to...
  - a) Try 3 additional visits
  - b) Call M.D. and recommend imaging
  - c) Tell patient to red shirt the year and keep treating
  - d) Discharge with failure to progress-not a PT problem



## Now What?

## Round Up

- MRI 3/11/2009
- No muscle tears or sign of sports hernia
- Confirmed stress fractures of superior and inferior left pubic rami

Any Questions?



## References

- Dahan R. Rehabilitation of muscle-tendon injuries to the hip, pelvis, and groin areas. *Sports Med Arthroscopy Rev* 1997; 3:326-33.
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- Morelli V, Smith V. Groin Injuries in Athletes. *American Family Physician* 2001; 64.8:1405-14